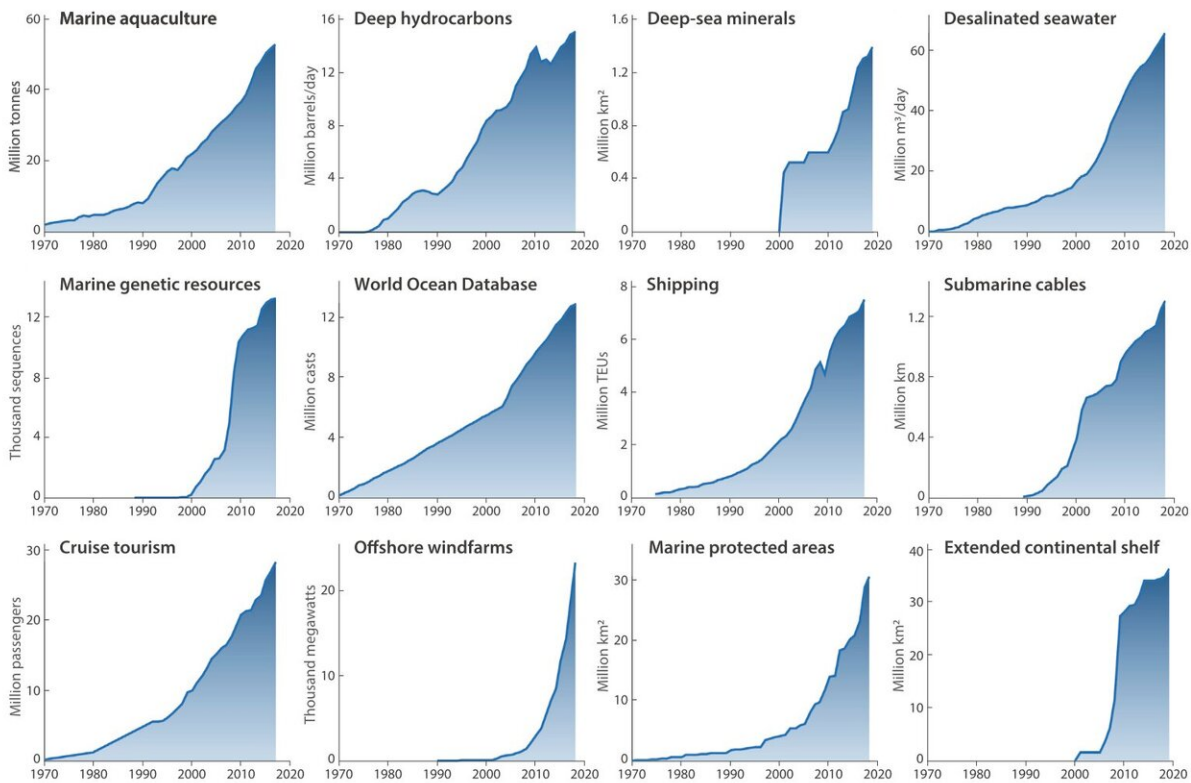


The Blue Acceleration: Recent colossal rise in human pressure on ocean quantified

January 24 2020



Global trends in use of the marine environment. Usage reached an inflection point around the turn of the new millennium. Credit: One Earth,

Human pressure on the world's oceans accelerated sharply at the start of the 21st century and shows no sign of slowing, according to a

comprehensive new analysis on the state of the ocean.

Scientists have dubbed the dramatic rise the "Blue Acceleration." The researchers from the Stockholm Resilience Centre, Stockholm University, synthesized 50-years of data from shipping, drilling, deep-sea mining, aquaculture, bioprospecting and much more. The results are published in the journal *One Earth* on 24 January.

The scientists say the largest [ocean](#) industry is the oil and gas sector, responsible for about one third of the value of the ocean economy. Sand and gravel are the ocean's most mined minerals to meet demand from the construction industry. As freshwater becomes an increasingly scarce commodity, around 16,000 [desalination plants](#) have sprung up around the world in the last 50 years with a steep rise since 2000, according to the analysis.

Lead author Jean-Baptiste Jouffray from the Stockholm Resilience Centre said, "Claiming [ocean resources](#) and space is not new to humanity, but the extent, intensity, and diversity of today's aspirations are unprecedented."

The industrialization of the ocean took off at the end of the last century, driven by a combination of technological progress and declining land-based resources.

"This Blue Acceleration is really a race for ocean resources and space, posing risks and opportunities for global sustainability."

The study highlights some positive human impacts. For example, the area protected from some exploitation has increased exponentially, with a surge since 2000 that shows no signs of slowing. And offshore wind farm technology has reached [commercial viability](#) in this period allowing the world to reduce reliance on fossil fuels.

The authors conclude by calling for increased attention to who is driving the Blue Acceleration, what is financing it, and who is benefiting from it. The United Nations is embarking on a "decade of the ocean" in 2021. The scientists say this is an opportunity to assess social-ecological impacts and manage ocean resources for long-term sustainability.

They highlight there is a high degree of consolidation relating the seafood industry, oil and gas exploitation, and bioprospecting, with just a small handful of multinational companies dominating each sector. The team suggests that banks and other investors could adopt more stringent sustainability criteria for ocean investments.

More information: Jean-Baptiste Jouffray et al. The Blue Acceleration: The Trajectory of Human Expansion into the Ocean. *One Earth*, [DOI: 10.1016/j.oneear.2019.12.016](https://doi.org/10.1016/j.oneear.2019.12.016)

Provided by Stockholm Resilience Centre

Citation: The Blue Acceleration: Recent colossal rise in human pressure on ocean quantified (2020, January 24) retrieved 29 April 2024 from <https://phys.org/news/2020-01-blue-colossal-human-pressure-ocean.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.